

A NEW NASAL MITE FROM A KOREAN WOODPECKER

(ACARINA, EPIDERMOPTIDAE)

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During 1953, while attached to the 5th Air Force in Korea, I had the opportunity to examine a number of birds for nasal mites. These birds were taken in a heavily wooded area of the Korean National Forest, approximately 4000 feet in elevation and 20 miles west of Uijongbu.

Several species of birds were parasitized by mites belonging to the family Rhinonyssidae, but one woodpecker (*Dryobates* sp.) was parasitized by a mite belonging to the family Epidermoptidae.

Boyd (1949) described a new genus and species of Epidermoptidae collected from the nasal cavity of a ring-billed gull from Galveston, Texas. Furman and Tarshis (1953) reviewed the literature on Epidermoptidae and described a new species in the genus *Microlichus* taken from hippoboseid flies parasitizing quail in California. Dubinin (1953) also presented an excellent review of the families Epidermoptidae and Freyanidae and described a new genus of epidermoptid from birds.

Epidermoptids are usually found on the skin of birds or their ectoparasites, although Thurman and Mulrennan (1947) found *Dermatophagoides crassus* on rats in Florida. Now it is evident that some of these mites have adapted themselves to live in the nasal passages of birds.

The Epidermoptidae are closely associated with the Psoroptidae. The genital opening of the Psoroptidae is, in general, transverse, slightly arch-shaped and pointing anteriorly, while that of the Epidermoptidae is, in general, triangle-shaped with the rounded apex pointing anteriorly. The exception is in the internal parasites of the genus *Pneumocoptes* and *Turbinoptes*. In the *Pneumocoptes* the genital opening is longitudinal, and in the *Turbinoptes* it is transverse. The following key to the genera is based upon females and has been modified from Furman and Tarshis (1953) and Dubinin (1953).

KEY TO THE GENERA OF EPIDERMOPTIDAE

1. Genital opening an inverted "V" 2
 Genital opening either transverse or longitudinal 8
2. Anterior genital sclerite free, situated behind posterior ends of apodemes II; apodemes III and IV face obliquely forward; posterior of body not bilobed *Dermatophagoides* Bogdanow, 1864
 Anterior genital sclerite fused to apodeme I 3
3. Anterior genital sclerite fused to middle portion of apodemes I so that two long processes of the apodemes project posteriorly from points of attachment; sharp toothlike processes on tibiae I and II; posterior of body with a pair of protuberances bearing setae *Strelkoviacar* Dubinin, 1953

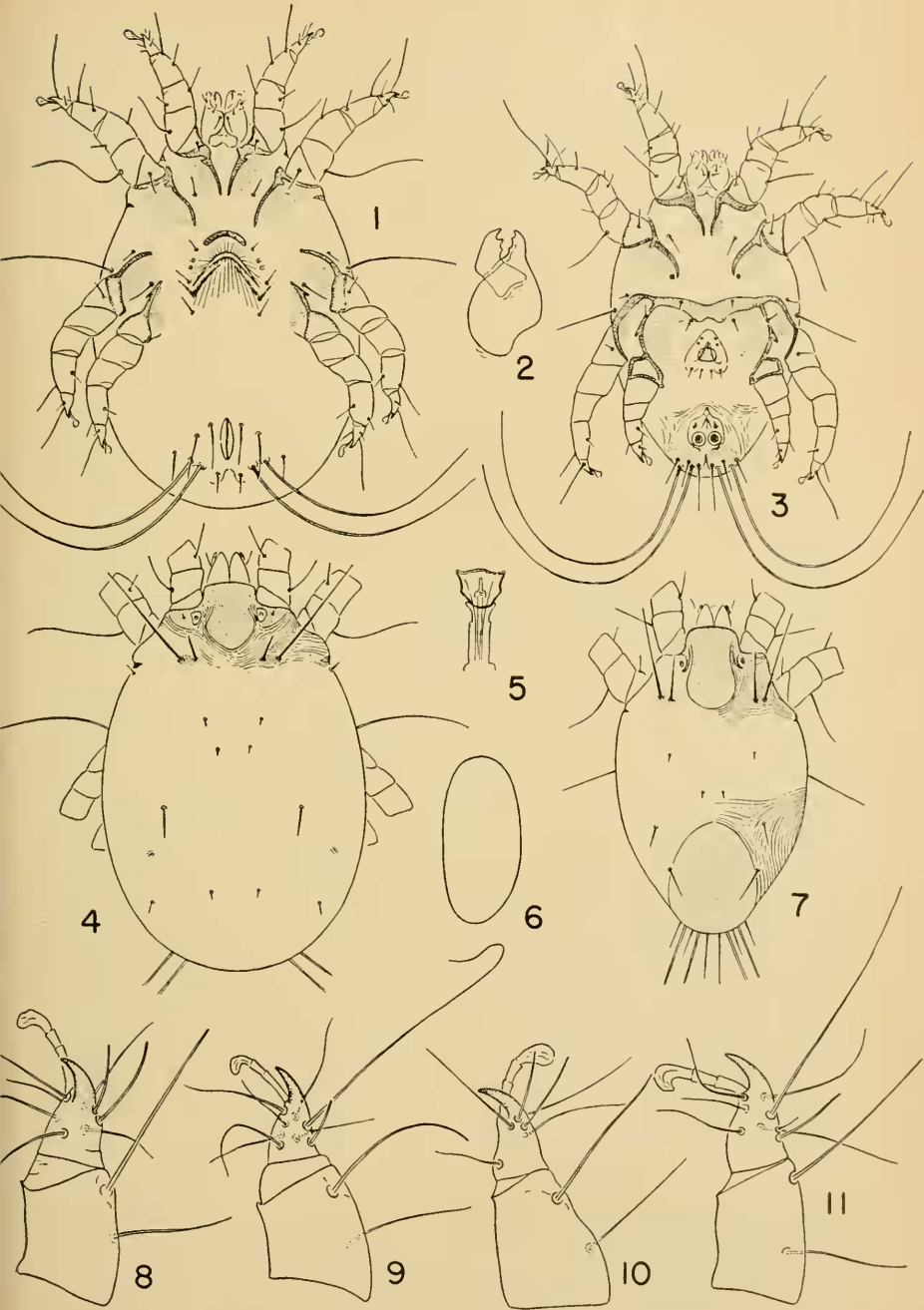
Anterior genital sclerite connected to posterior ends of apodemes I	4
4. Distal clawlike spines of tarsi absent or vestigial	5
Distal clawlike spines on tarsi highly modified on tarsi I	7
5. Tarsi and femora III and IV with reflexed, hooklike processes; coxal apodemes III and IV transverse <i>Dermation</i> Trouessart and Newmann, 1888	
Tarsi normal; coxal apodemes III and IV point obliquely forward	6
6. Distal clawlike spines present on all tarsi; distal segment of palpi with large membranous growth	<i>Epidermoptes</i> Rivolta, 1876
Clawlike spines not present on tarsi; palpi without membranous growth	<i>Rivoltasia</i> Canestrini, 1894
7. Hysterosomal plate present; clawlike spine on tarsus II	
..... <i>Microlichus</i> Trouessart and Newmann, 1888	
Hysterosomal plate absent; clawlike spine absent on tarsus II	
..... <i>Myialges</i> Sergent and Trouessart, 1907	
8. Genital opening transverse; coxal apodemes not enlarged	
..... <i>Turbinoptes</i> Boyd, 1949	
Genital opening longitudinal, with vulva margins wrinkled; coxal apodemes cover entire venter	<i>Pneumocoptes</i> Baker, 1951

***Dermatophagoides sorenseni*, new species**

Diagnosis.—Body oval, with few setae; dorsal shields present; legs of equal length; legs I and II of similar width but thicker than legs III and IV, which are of equal width; tarsi short, each bearing few setae, one large clawlike spine, one small clawlike spine, and an elongated, segmented, distally-expanded pretarsus; sexual dimorphism as illustrated; genital sclerite of female neither wide nor U-shaped and not surrounding genital opening; apodemes of coxae III of male united in a transverse band anterior to genital opening.

Female (fig. 1).—Body oval, with few setae. Skin soft, with striae. Anterior dorsal plate present, 118 μ long and 163 μ wide. Two lateral depressions, with one pore and one seta each, located on each side of the plate (fig. 4). No suture visible between proterosoma and hysterosoma. Eyes lacking. Posterior extremity of body rounded. Anal opening pointing subterminal; genital opening triangular, anteriorly, lying between coxae III. Body length from posterior margin to anterior margin of the dorsum 455 μ ; body width 292 μ . Gnathosoma conspicuous from above; chelicerae strongly chelate (fig. 2); pharyngial support can be seen at base of gnathosoma. *Legs*. The five-segmented legs attached to venter with anterior pairs of coxae separated from posterior pairs. Legs I and II directed forward and outward, legs III and IV directed posteriorly. All legs of similar length, less than one half that of body. Legs I and II of equal width but stouter than legs III and IV, which are also of equal width. Epimera I not united. Genital apodeme short, neither U-shaped nor surrounding genital opening. Tarsi I and II of each sex (figs. 8, 9, 10, 11) each with a single distal clawlike spine or extension of segment; tarsi III and IV each with a large and a small spine.

Dermatophagoides sorenseni, n. sp.: fig. 1, venter of female; fig. 2, chela, female; fig. 3, venter of male; fig. 4, dorsum of female; fig. 5, pretarsus of female; fig. 6, egg; fig. 7, dorsum of male; fig. 8, tibia and tarsus I, female; fig. 9, tibia and tarsus II, female; fig. 10, tibia and tarsus I, male; fig. 11, tibia and tarsus II, male.



Flask-shaped elongated segmented pretarsus (fig. 5) arises laterad of the single spine on tarsi I and II, and from between the paired spines on tarsi III and IV. *Body setae.* Venter of body with thirteen pairs of setae, consisting of one medio-lateral pair $129\ \mu$ long, one pair anterior to apodemes of coxae II, one pair anterior to apodemes of coxae III and IV, respectively, three spiniform pairs flanking genital opening, two spiniform pairs on each side of anal opening, and four terminal pairs. Two pairs of the terminal setae extremely long, the longest being $270\ \mu$ in length. Dorsum with seven pairs of setae, one short pair in lateral depression of dorsal plate, two pairs in propodosomal area, the longest pair being $126\ \mu$ long; four pairs in hysterosomal area, the longest pair only $23\ \mu$ long.

Male (fig. 3).—The male differs from the female in body size and in the character of the genital and anal region. Two dorsal plates present (fig. 7). Length of male from base of gnathosoma to posterior end of hysterosoma $251\ \mu$; width $234\ \mu$; the longest anal seta $285\ \mu$ long. Posterior dorsal plate $129\ \mu$ long and $117\ \mu$ wide; two pores located on lateral margins of plate. Anterior dorsal plate $138\ \mu$ wide and $120\ \mu$ long; two lateral depressions, with one pore each, located on lateral margins of plate. Anal suckers located on each side of anus. Apodemes of coxae III united in a transverse band anterior to genital opening.

Egg (fig. 6).—During the process of mounting, an egg was expelled; the egg is $184\ \mu$ long and $90\ \mu$ wide.

Type material.—Holotype δ and allotype ♀ from the nasal cavity of a woodpecker (*Dryobates* sp.) collected near Uijongbu, Korea, October 10, 1953. Holotype, allotype, and two paratypes deposited in the U. S. National Museum, Washington, D. C. U. S. National Museum No. 2203.

Remarks.—Two males and four females were collected from the nasal cavity of a woodpecker. These mites are very small and colorless and can be found by observing the nasal membrane of the bird under a dissecting microscope and watching for a movement in the nasal fluids caused by the mites. This species is easily separated from the other genera in that the tarsi have two clawlike spines on each leg and epimera I are not united. The genital opening is triangular. It can be separated from other species of *Dermatophagoides* in that the tarsi have double clawlike spines, the genital sclerite of the female does not surround the genital opening, and epimera III of the male are connected to form a transverse band anterior to the genital opening. The mite was named after Professor C. J. Sorenson, Emeritus Professor, Utah State Agricultural College, Logan, Utah, who has contributed an outstanding service to the institution and to the state of Utah. I also wish to express my sincere gratitude to Drs. E. W. Baker and G. W. Wharton for their suggestions and criticisms during my work on this paper.

REFERENCES

- Baker, E. W. and G. W. Wharton, 1952. An Introduction to Acarology. The Macmillan Co., New York.
- Boyd, E. M., 1949. A new genus and species of mite from the nasal cavity of the ring-gilled gull (*Aearina*: Epidermoptidae). Jour. Parasit. 35 (3):295-300.

- Dubinin, W., 1953. Analgesoidea, Part 2, families Epidermoptidae and Freyaniidae. Fauna U.S.S.R. Arachnida 6 (6):1-411.
- Furman, D. P. and I. B. Tarshis, 1953. Mites of the genera *Myialges* and *Microlichus* (Acarina: Epidermoptidae) from avian and insect hosts. Jour. Parasit. 39 (1):70-78.
- Thurman, D. C. and J. A. Mulrennan, 1947. Sarcoptoid mites on rats in Florida. Jour. Econ. Ent. 40 (4):591.

A NEW LEPTOPODID FROM INDIA
(HEMIPTERA, LEPTOPODIDAE)

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During the course of studying shore-bugs of the family Leptopodidae in the British Museum (Natural History), I found an undescribed species of the genus *Leptopus* Latreille in the unsorted accession from India. In addition I also came across several specimens of the rare *Leptopus horvathi* Drake and Hottes from Kamaon, Kaldwani District, India, collected by H. G. Champion. The latter was described from Madagascar. It also seems desirable to point out that Drake and Hoberlandt (1951) failed to include the occurrence of *Leptopus spinosus* Rossi in western United States. According to Usinger (1951), this leptopodid was accidentally introduced into California and is now widely dispersed along the Pacific Coast of that state.

***Leptopus decus*, new species**

Small, obovate, black, shining, hemelytra grayish testaceous with numerous small brownish spots and two much larger subapical dark brown spots (one in each outer corium); embolium pale testaceous, without markings; head black, fore part of vertex and entire front fulvous, a median longitudinal sulcus in front of eyes, a subbasal spot near inner margin of each eye, and a large callose just back of ocelli flavous; ocelli contiguous within, placed obliquely on top of a brownish tubercle with surfaces sloping downward laterally; head beneath fuscous, with two extremely long testaceous spines on each side, also with several smaller testaceous spines and long bristly hairs on gula; eyes very large, blackish fuscous, slightly convergent anteriorly, widely separated. Rostrum pale testaceous with last segment brownish; segment I beneath with an extremely long pair of slender testaceous spines on each side; II broader, with shorter lateral spines; III much slenderer, tapering apically; proportions: I, 28; II, 20; III, 13. Antennae testaceous, segment 1 one and one-third times as long as second, the other segments missing.

Pronotum blackish fuscous to black, shining, the explanata margins testaceous with outer edge embrowned; collar constricted, not raised anteriorly, narrower than fore lobe; anterior lobe much narrower than hind lobe, divided longitudinally by a median sulcus into right and left lobes, without distinct punctures; hind lobe convex, deep black, quite shining, coarsely punctate, almost as long as front lobe without collar. Scutellum a little wider at base than median length,